

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Joseph Phillip Bigus, Brian John Cragun, and Helen Roxlo Delp

Appeal No. _____
Application No. 09/431,833

AMENDED APPEAL BRIEF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Joseph Phillip Bigus et al. Art Unit: 3621
Serial No.: 09/431,833 Examiner: Firmin Backer
Filed: November 2, 1999 Atty. Docket No.: IBM/02B
For: INTELLIGENT AGENT WITH NEGOTIATION CAPABILITY AND METHOD
OF NEGOTIATION THEREWITH

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P.O. Box 1450
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AMENDED APPEAL BRIEF

I. REAL PARTY IN INTEREST

This application is assigned to International Business Machines Corporation, of Armonk, New York.

II. RELATED APPEALS AND INTERFERENCES

An appeal is currently pending in an application identified as being related to the instant application, U.S. S/N 09/100,595.

III. STATUS OF CLAIMS

Claims 54-63 and 104-116 are pending in the Application. All of these claims currently stand rejected and are now on appeal. Claims 1-53 and 64-103 were canceled by way of a preliminary amendment accompanying the filing of the Application.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to final rejection (Paper No. 11).

V. SUMMARY OF CLAIMED SUBJECT MATTER

Applicants' invention is generally directed to the identification of unknown parties interacting with an intelligent agent, e.g., for the purpose of modifying the behavior of an intelligent agent depending upon the identity of a party with which the agent is interacting.

As discussed at pages 3 and 4 of the Application, intelligent agents are computer programs that "operate much like software-implemented 'assistants' to automate and simplify certain tasks in a way that hides their complexity from the user." (Application, page 3, lines 6-8). Furthermore, intelligent agents are "characterized by the concept of delegation, where a user, or client, entrusts the agents to handle tasks with at least a certain degree of autonomy," causing them to "operate with varying degrees of constraints depending upon the amount of autonomy that is delegated to them by the user." (Application, page 3, lines 13-18). In addition, as further stated in the Application:

Intelligent agents may also have differing capabilities in terms of intelligence, mobility, agency, and user interface. Intelligence is generally the amount of reasoning and decision making that an agent possesses. This intelligence can be as simple as following a predefined set of rules, or as complex as learning and adapting based upon a user's objectives and the agent's available resources.

Mobility is the ability to be passed through a network and execute on different computer systems. That is, some agents may be designed to stay on one computer system and may never be passed to different machines, while other agents may be mobile in the sense that they are designed to be passed from computer to computer while performing tasks at different stops along the way. User interface defines how an agent interacts with a user, if at all. (Application, page 3, line 19 to page 4, line 5).

Agents have a number of uses in different computer applications, including, for example, electronic commerce, where an agent may be used to seek out other parties such as other users, computer systems and agents, conduct negotiations on behalf of their client, and enter into commercial transactions. (Application, page 4, lines 6-15). In this regard, one concern that may arise with respect to an intelligent agent relates to the interaction of the agent with unknown parties. Unlike the situation where an agent is interacting with a party that is known to be

reliable, when an agent is interacting with an unknown party, the agent may be subjected to a greater risk of malicious activities, e.g., with respect to tampering, deception, snooping, etc. Particularly when an agent is mobile in nature and/or resident on an unsecured or third party computer system, the owner or principal of an agent may not be able to ensure that the agent interacts only with trusted parties. (Application, page 6, lines 4-14). Indeed, it may be desirable in some instances to alter the behavior of an agent when the agent is interacting with unknown parties to better protect the agent against potential malicious activities.

Therefore, to assist in the identification of unknown parties interacting with an intelligent agent, embodiments consistent with the invention maintain records of known parties, with the records including one or more attributes that are used to characterize those known parties. (Application, page 8, lines 3-8). By doing so, when an agent interacts with an unknown party, the agent is able to compare one or more attributes related to the unknown party with those of known parties. Based upon such a comparison, the agent may be able to identify the unknown party as that known party for which the attributes have been found to most closely match. (Application, page 8, lines 8-16).

A number of different types of attributes may be compared to identify an unknown party. For example, with regard to an unknown party that is implemented as an agent used in an electronic commerce environment, information such as name or identification, client name, bank and/or bank account number, credit card number, homebase location (e.g., IP address or domain), program size, message origination location, or pattern of pattern of input/output (I/O) compared to CPU cycles for I/O transmissions, may be used. (Application, page 40, lines 4-13). As another alternative, an unknown agent may be scanned and compared to other known agents, e.g., by comparing the percentage of identical code, determining the language the agent was written in, or searching for unique patterns in much the same manner as a virus checking program. (Application, page 40, lines 13-18).

Moreover, while other algorithms may be used to perform the comparison of attributes, the Application describes one particular algorithm that relies on weighting factors associated with each attribute. (Application, page 40, lines 19-21). The comparison of the attributes of an unknown party with a known party involves the calculation of an accumulated weighting factor

by summing the weighting factors of the attributes of the known party which match those of the unknown party. (Application, page 40, lines 24-29). As such, the identification of the unknown party may be based upon identifying the known party that has the largest accumulated weighting factor. (Application, page 41, lines 8-11).

Support for the claimed subject matter of independent claims 54, 60 and 61 may be found, for example, in the Application as follows: page 39, lines 25-29 (for a database including a plurality of records, each record associated with a known party and including the plurality of attributes related thereto), and Fig. 10 and page 40, line 22 to page 41, line 21 (for a method, identification module and program that compares a plurality of attributes for an unknown party with those of each known party and identifies the unknown party as the known party having the attributes which most closely match those of the unknown party, where the unknown party is a party other than a client that has delegated at least one task to the intelligent agent).

Support for the claimed subject matter of independent claim 113 may be found, for example, in the passages cited above for claims 54, 60, and 61, as well as at page 39, lines 23-39 (for identifying an unknown party that is a second intelligent agent interacting with a first intelligent agent). Likewise, support for the claimed subject matter of independent claim 114 may be found, for example, in the passages cited above for claims 54, 60, and 61, as well as at page 39, lines 18-22 (for controlling the behavior of an intelligent agent when interacting with an unknown party based upon the identification of the unknown party).

Specific support for the claimed subject matter for the independent claims as a whole has been provided above. No concise explanation of the subject matter of the dependent claims is provided as no such explanation is required by 37 C.F.R. § 41.37(c)(1)(v). However, a direct mapping of the aforementioned discussion to the individual independent claims 54, 60, 61, 113 and 114 as required by the Examiner in the Notification of Non-Compliant Appeal Brief dated March 21, 2007, is presented below:

Independent Claim 54

A method (Application, page 8, lines 3-7) of identifying an unknown party (Application, page 6, lines 4-14) interacting with an intelligent agent (Application, pages 3-4), the method comprising the steps of:

- (a) determining at least one attribute related to the unknown party, wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent (Application, page 8, lines 8-16);
- (b) comparing the attribute for the unknown party with attributes related to a plurality of known parties (Application, Fig. 10, page 40, line 22 to page 41, line 21); and
- (c) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party (Application, page 39, lines 23-39).

Independent Claim 60

An apparatus for identifying an unknown party (Application, page 6, lines 4-14) interacting with an intelligent agent (Application, pages 3-4), comprising:

- (a) a database including a plurality of records, each record associated with a known party and including the plurality of attributes related thereto (Application, page 39, lines 25-29); and
- (b) an identification module, coupled to the database, the identification module configured to compare a plurality of attributes for the unknown party with those of each known party (Application, Fig. 10, page 40, line 22 to page 41, line 21) and to identify the unknown party as the known party having the attributes which most closely match those of the unknown party (Application, page 39, lines 23-39), wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent (Application, p. 6, lines 4-14).

Independent Claim 61

A program product comprising:

(a) a program (Application, page 15, lines 21-30) configured to perform a method of identifying an unknown party (Application, page 6, lines 4-14) interacting with an intelligent agent (Application, pages 3-4), the method comprising the steps of:

(1) determining at least one attribute related to the unknown party, wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent (Application, page 8, lines 8-16);

(2) comparing the attribute for the unknown party with attributes related to a plurality of known parties (Application, Fig. 10, page 40, line 22 to page 41, line 21); and

(3) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party (Application, page 39, lines 23-39); and

(b) a signal bearing media (Application, page 15, lines 21-30) bearing the program.

Independent Claim 113

A method of identifying an unknown party (Application, page 6, lines 4-14) interacting with a first intelligent agent (Application, pages 3-4), the method comprising the steps of:

(a) determining at least one attribute related to the unknown party, wherein the unknown party is a second intelligent agent interacting with the first intelligent agent (Application, page 8, lines 8-16);

(b) comparing the attribute for the unknown party with attributes related to a plurality of known parties (Application, Fig. 10, page 40, line 22 to page 41, line 21); and

(c) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party (Application, page 39, lines 23-39).

Independent Claim 114

A method of identifying an unknown party (Application, page 6, lines 4-14) interacting with an intelligent agent (Application, pages 3-4), the method comprising the steps of:

- (a) determining at least one attribute related to the unknown party (Application, page 8, lines 8-16);
- (b) comparing the attribute for the unknown party with attributes related to a plurality of known parties (Application, Fig. 10, page 40, line 22 to page 41, line 21);
- (c) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party (Application, page 39, lines 23-39); and
- (d) controlling a behavior of the intelligent agent when interacting with the unknown party based upon the identification of the unknown party (Application, page 39, lines 18-22).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 54-63 and 104-116¹ stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,704,017² to Heckerman et al. (hereinafter *Heckerman*) in view of U.S. Patent No. 5,983,200 to Slotznick (hereinafter *Slotznick*).

VII. ARGUMENT

Applicant respectfully submits that the Examiner's obviousness rejections of claims 54-63 and 104-116 are not supported on the record, and that the rejections should be reversed. A *prima facie* showing of obviousness requires that the Examiner establish that the differences between a claimed invention and the prior art "are such that the subject matter as a whole would

¹ The Examiner's formal rejection only references claims 54-63 and 104-112; however, Applicants assume claims 113-116 were also rejected on this ground as they are addressed in the discussion of the rejection.

² The Examiner's formal rejection references U.S. Patent No. 5,613,012; however, Applicants assume the Examiner intended to reference U.S. Patent No. 5,704,017 to Heckerman et al., which was referenced in the PTO-892 form that accompanied the final Office Action.

have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. §103(a). Such a showing requires that all claimed features be disclosed or suggested by the prior art. Such a showing also requires objective evidence of the suggestion, teaching or motivation to combine or modify prior art references, as “[c]ombining prior art references without evidence of such a suggestion, teaching or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight.” In re Dembiczak, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).”

Applicant respectfully submits that, in the instant case, the Examiner has failed to establish a *prima facie* case of obviousness as to any of the pending claims, and as such, the rejections should be reversed. Specific discussions of the non-obviousness of each of the aforementioned claims are presented hereinafter; however, Applicants first wish to address the overriding defects in the Examiner’s rejections that have severely precluded any meaningful progress from occurring in the prosecution of this Application.

Specifically, as Applicants noted in the Pre-Appeal Brief Review Request filed on September 22, 2005, the rejections currently under appeal represent the seventh separate rejection of the claims (the first six having been applied against the claims as originally filed), and come after two separate attempts by Applicants to obtain appellate review of the application (which in both instances resulted in prosecution being reopened and a new office action being issued). Moreover, as will become more apparent below, the references cited in the latest rejections are no better than the art that has already been successfully overcome. The piecemeal examination that has occurred in the course of prosecution of this Application is not only grossly unfair to Applicants, it is expressly discouraged by MPEP §707.07(g).

In addition, with respect to the content of the Examiner’s rejections, Applicants wish to point out that the latest Office Action (as with practically every other Office Action) is devoid of any meaningful arguments in support of the Examiner’s rejections. The Office Action consists of little more than a reproduction of the text of each claim followed by a list of passages from the prior art, and almost always this list of passages is identical for each claim. There are no supporting arguments that apply the passages to the claim language at issue.

Furthermore, in each subsequent Office Action, the Examiner typically substitutes the name of the new reference and the citation of relevant passages, but does not even discuss how the new reference or the cited passages therein apply to the relevant claim language. The discussion of motivation is also unchanged. Moreover, in the case of independent claims 113 and 114, which were added in Applicants' last Amendment and Response, these claims were simply grouped with the other independent claims without additional comment, despite the fact that these claims recite different claim limitations than the other independent claims with which they are grouped.

That Applicants have been forced to expend such a significant amount of time and resources over the past six years in repeatedly responding to Office Actions that fail to ever address Applicants' arguments in favor of patentability, and that represent increasingly little original thought, is an injustice. More importantly, given that the rejections are utterly devoid of any substantive bases to support a *prima facie* case of obviousness as to any of the pending claims, Applicants respectfully submit that the Examiner's rejections should be reversed as defective on their face, and the Application be passed to allowance.

A detailed discussion of the patentability of each of the pending claims is provided below.

Claims 54, 60 and 61

Claim 54 generally recites a method of identifying an unknown party interacting with an intelligent agent. The method includes determining at least one attribute related to the unknown party, comparing the attribute for the unknown party with attributes related to a plurality of known parties, and identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party. The claim also recites that the unknown party is a party other than a client that has delegated at least one task to the intelligent agent.

Claim 54 was previously rejected as being obvious in view of *Hoffman* and *Slotznick*, but in the latest Office Action, *Hoffman* was replaced with *Heckerman*. In the Examiner's prior rejections based upon *Hoffman*, the Examiner relied upon *Hoffman* for allegedly teaching determining an attribute related to an unknown party, comparing the attribute for the unknown party with attributes related to a plurality of known parties, and identifying the unknown party as

the known party having the attribute which most closely matches that of the unknown party. The Examiner now relies on *Heckerman* for disclosing these same concepts.

However, nowhere in *Heckerman*, and in particular, nowhere in the specific passages relied upon by the Examiner (abstract, col. 2, line 58 to col. 3, line 15, col. 4, lines 38-62, col. 7, lines 19-55, col. 8, lines 11-16, and col. 18, line 9 to col. 20, line 64), is there even any discussion of attempting to identify an unknown user. Instead, *Heckerman* is directed to a neural network that is used to predict unknown preferences of users in a particular field of decision making (see cols. 18-20 for a discussion of various applications, such as predicting music preferences, television preferences, newspaper preferences, web site preferences, etc.). Nowhere is the identity of a user or other party ever at issue in *Heckerman*, and nowhere is any attempt made in *Heckerman* to analyze attributes of a party to determine the identity of that party. As a result, contrary to the Examiner's assertions regarding *Heckerman*, there is no teaching in the reference regarding determining attributes of unknown parties, comparing those attributes with those of known parties, or identifying an unknown party, as is recited in claim 54.

The Examiner also continues to rely on *Slotznick* for allegedly disclosing the identification of an unknown party interacting with an intelligent agent. As Applicants argued in the prior Amendment and Response, which arguments were never addressed or rebutted by the Examiner in the final Office Action, *Slotznick* is merely directed to an intelligent agent that is described as serving more or less as an "executive assistant" that executes delegated tasks on behalf of a user.

The only functionality that is even arguably analogous to identifying an unknown party is a login or authorization procedure that must be followed by a client before delegating tasks to the *Slotznick* intelligent agent. See, e.g., col. 16, line 65 to col. 17, line 34. However, the login procedure described in *Slotznick* is essentially used by the client or principal of the intelligent agent in order to program the intelligent agent to perform desired tasks on behalf of that client. Claim 54 was amended in the prior Amendment and Response to recite that the unknown party being identified is a party other than a client that has delegated a task to the intelligent agent. *Slotznick* is entirely silent with respect to this feature.

Applicants have also previously argued, without rebuttal from the Examiner, that the identification of a party other than a client that has delegated a task to an intelligent agent, as recited in claim 54, represents a non-obvious distinction from *Slotznick* and the other prior art of record. The invention of claim 54 addresses a specific risk that arises with intelligent agents as a result of such intelligent agents operating with delegated autonomy, particularly when operating in uncontrolled or untrusted environments. Specifically, in such circumstances, intelligent agents very well may be subjected to an increased risk from malicious parties who may attempt to deceive or otherwise take advantage of an intelligent agent. Thus, by attempting to identify unknown parties with which intelligent agents are interacting, embodiments consistent with the invention potentially enable intelligent agents to modify their behavior so as to minimize the risk posed by a party with which they are interacting.

Neither *Slotznick*, which discloses an authorization procedure used to allow a client access to an intelligent agent for the purpose of delegating tasks to that agent, nor *Heckerman*, which doesn't even attempt to ascertain the identify of any party, discloses or suggests the identification of a party other than one attempting to delegate tasks to an agent. Accordingly, the proposed combination of *Heckerman* and *Slotznick* does not disclose the claimed concept of "identifying an unknown party interacting with an intelligent agent . . . wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent."

Furthermore, the Examiner has failed to provide any objective evidence of a recognized motivation in the art to modify *Heckerman* to incorporate the identification of an unknown party interacting with an intelligent agent, where that unknown party is not a client attempting to delegate a task to the intelligent agent. As noted above, *Heckerman* is completely silent with respect to identifying any party, much less a party interacting with an intelligent agent.

Likewise, the only functionality in *Slotznick* that even arguably attempts to identify a party is that of a login procedure that must be followed by a client prior to delegating a task to an intelligent agent. There is no suggestion in the reference that such functionality could be used to identify other parties that may interact with an intelligent agent. Accordingly, Applicants submit that the Examiner has failed to raise a *prima facie* case of obviousness as to claim 54. Applicants therefore respectfully submit that a clear error exists with respect to the Examiner's rejection of

claim 54, and that the rejection of this claim should be reversed, and the claim allowed over the prior art of record.

Independent claims 60 and 61 likewise recite the concept of identifying an unknown party interacting with an intelligent agent by comparing an attribute for an unknown party with attributes related to a plurality of known parties and identifying the unknown party as the known party having the attributes which most closely match those of the unknown party, where the unknown party is a party other than a client that has delegated at least one task to the intelligent agent. Accordingly, Applicants submit the Examiner's rejections of claims 60 and 61 should be reversed for the same reasons as presented above for claim 54, and that these claims should be allowed over the prior art of record.

Claims 55-56, 62-63, and 108-109

Claims 55-56, 62-63, and 108-109 are not separately argued.

Claims 57, 105 and 110

Claim 57 depends from claim 55 and further recites that each of a plurality of attributes related to an unknown party has a weighting factor associated therewith. Claim 57 also recites that the comparing step calculates an accumulated weighting factor for each known party by summing the weighting factors of the attributes of the known party which match those of the unknown party, and that the identifying step identifies the unknown party as the known party with the largest accumulated weighting factor.

The Examiner has not specifically addressed what particular disclosure in *Heckerman* renders claim 57 obvious (other than the blanket citation of passages from the reference), or the reasons why claim 57 is not distinguishable from the prior art of record. In addition, Applicants can find no discussion in either reference purporting to disclose the concept of applying weighting factors to a plurality of attributes, or of summing weighting factors of matching attributes to calculate an accumulated weighting factor that is used to identify an unknown party. *Heckerman* discloses, at the most, a Bayesian network that predicts user preferences based upon one or more user attributes.

Accordingly, Applicants respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 57. Likewise, the rejections of claims 105 and 110, which recite similar subject matter, are similarly deficient. Reversal of the rejections, and allowance of claims 57, 105 and 110, are therefore respectfully requested.

Claim 104

Claim 104 depends from claim 60, and additionally recites that each of a plurality of attributes has a weighting factor associated therewith. As such, claim 104 permits different attributes to be assigned different degrees of relevancy for use in the determination of the identity of an unknown party.

Applicants can find no discussion in either reference purporting to disclose the concept of applying weighting factors to a plurality of attributes, much less applying weighting factors to attributes in the context of identifying unknown parties. Moreover, the Examiner has not asserted, nor have Applicants found, any motivation in either reference to modify *Heckerman* to incorporate such functionality. As such, Applicants respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 104. Reversal of the rejection, and allowance of claim 104, are therefore respectfully requested.

Claims 58, 106 and 111

Claim 58 depends from claim 55 and further recites that the unknown party is an intelligent agent configured to conduct electronic transactions, and that the plurality of attributes are selected from the group consisting of an agent name, a client name, a bank name, a bank account number, a credit card number, a homebase location, an agent program name, a location or name of a source with which the unknown party communicates, and combinations thereof. Of note, therefore, claim 58 is directed to identifying an unknown intelligent agent that is interacting with another intelligent agent.

As with the other dependent claims, the Examiner has not specifically addressed what particular disclosure in *Heckerman* renders claim 58 obvious, or the reasons why claim 58 is not distinguishable from the prior art of record, other than making a naked citation of a list of

passages from *Heckerman*. In addition, Applicants can find no disclosure in either reference that teaches any functionality that would even arguably be capable of ascertaining the identity of a computer program such as an intelligent agent. As noted above, *Heckerman* does not attempt to identify any party, much less any intelligent agent. In addition, while Sloznick discloses an authorization or login procedure that enables a client to delegate tasks to an intelligent agent, it is quite evident from the reference that this procedure (*e.g.*, as discussed at col. 16, line 65 to col. 17, line 34, which involves a user entering a password and user ID, or alternatively biometric information) is for the purpose of identifying a human being, rather than an intelligent agent or other type of computer program.

It should also be noted that the Examiner has provided no explanation for where in either reference any of the enumerated attributes recited in claim 58 (“an agent name, a client name, a bank name, a bank account number, a credit card number, a homebase location, an agent program name, a location or name of a source with which the unknown party communicates”) are found.

Applicants therefore respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 58. Likewise, the rejections of claims 106 and 111, which recite similar subject matter, are similarly deficient. Reversal of the rejections, and allowance of claims 58, 106 and 111, are therefore respectfully requested.

Claims 59, 107 and 112

Claim 59 depends from claim 55 and further recites that the unknown party is an intelligent agent, and that the determining step includes the step of scanning program code for the unknown party to determine attributes thereof.

As with the other dependent claims, the Examiner has not specifically addressed what particular disclosure in *Heckerman* renders claim 59 obvious, or the reasons why claim 59 is not distinguishable from the prior art of record. In addition, Applicants can find no disclosure in *Heckerman* that teaches any functionality that would even arguably be capable of scanning program code for an unknown intelligent agent to determine attributes thereof. The Examiner did not assert that *Slotznick* is at all relevant to this concept, nonetheless, Applicants were unable to find any disclosure in *Slotznick* that appears to be relevant in this regard.

As discussed above in connection with claim 58, the references cited by the Examiner fail to disclose or suggest the identification of an unknown intelligent agent interacting with another intelligent agent. Moreover, *Slotznick's* disclosure of a login technique for identifying an unknown person does not even arguably suggest the scanning of program code to ascertain the identity of an intelligent agent or other computer program.

Applicants therefore respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 59. Likewise, the rejections of claims 107 and 112, which recite similar subject matter, are similarly deficient. Reversal of the rejections, and allowance of claims 59, 107 and 112, are therefore respectfully requested.

Claim 113

Claim 113 is similar to claim 54, but rather than reciting that the unknown party is a party other than a client that has delegated a task to the intelligent agent, claim 113 recites that the unknown party is a second intelligent agent interacting with a first intelligent agent.

In rejecting claim 113, the Examiner simply groups the claim in with claims 54, 60 and 61, and as a result, does not even address the different subject matter recited in the claim. Nonetheless, as noted above in connection with claims 58 and 59, neither reference discloses or suggests the identification of an unknown party interacting with an intelligent agent where the unknown party is another intelligent agent. *Heckerman* is silent with respect to the concept of identifying any party, much less a party that is an intelligent agent. Moreover, while *Slotznick* discloses a login technique incorporating user ID/password entry or biometrics, the technique is specifically focused on authorizing a person, rather than an intelligent agent or other type of computer program. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness with respect to this aspect of claim 113.

It should also be noted that the other features recited in claim 113, namely the claimed concept of identifying an unknown party interacting with an intelligent agent by comparing an attribute for an unknown party with attributes related to a plurality of known parties and identifying the unknown party as the known party having the attributes which most closely match

those of the unknown party, are also not disclosed or suggested by *Heckerman* or *Slotznick*, as discussed above in connection with claims 54, 60 and 61.

Applicants therefore respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 113. Reversal of the rejection, and allowance of claim 113, are therefore respectfully requested.

Claim 114

Claim 114 is similar to claim 54, but rather than reciting that the unknown party is a party other than a client that has delegated a task to the intelligent agent, claim 114 recites an additional step of controlling the behavior of the intelligent agent while interacting with an unknown party based upon the identification of the unknown party.

As with claim 113, the Examiner simply groups claim 114 in with claims 54, 60 and 61, and as a result, does not even address the different subject matter recited in the claim. Moreover, as with most of the Examiner's other rejections, the Examiner has not specifically addressed what particular disclosure in *Heckerman* renders claim 114 obvious, or the reasons why claim 114 is not distinguishable from the prior art of record, other than making a naked citation of a list of passages from *Heckerman*. In addition, Applicants can find no disclosure in either reference that teaches any functionality that would even arguably be capable of controlling the behavior of an intelligent agent while interacting with an unknown party based upon the identification of the unknown party. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness with respect to this aspect of claim 114.

It should also be noted that the other features recited in claim 114, namely the claimed concept of identifying an unknown party interacting with an intelligent agent by comparing an attribute for an unknown party with attributes related to a plurality of known parties and identifying the unknown party as the known party having the attributes which most closely match those of the unknown party, are also not disclosed or suggested by *Heckerman* or *Slotznick*, as discussed above in connection with claims 54, 60 and 61.

Applicants therefore respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 114. Reversal of the rejection, and allowance of claim 114, are therefore respectfully requested.

Claim 115

Claim 115 depends from claim 114, and additionally recites that controlling the behavior of the intelligent agent includes controlling a negotiation strategy used by the intelligent agent when conducting an electronic transaction with the unknown party.

As with the rejections of the other dependent claims, the Examiner has not specifically addressed what particular disclosure in *Heckerman* renders claim 115 obvious, or the reasons why claim 115 is not distinguishable from the prior art of record, other than making a naked citation of a list of passages from *Heckerman*. In addition, Applicants can find no disclosure in either reference that teaches any functionality that would even arguably be capable of controlling a negotiation strategy used by an intelligent agent when conducting an electronic transaction with an unknown party.

Indeed, if the Examiner is taking the position that *Slotznick* discloses the identification of an unknown party through its disclosed login technique, in that event the unknown party is the client or principal of the intelligent agent. *Slotznick* therefore could not be interpreted to disclose controlling the negotiation strategy used by an intelligent agent when conducting an electronic transaction with an unknown party, since the unknown party would be the client, rather than another party with which a negotiation is being performed.

Applicants therefore respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 115. Reversal of the rejection, and allowance of claim 115, are therefore respectfully requested.

Claim 116

Claim 116 depends from claim 114, and additionally recites that identifying the unknown party includes identifying the unknown party as being untrustworthy, and that controlling the behavior of the intelligent agent includes modifying the behavior of the intelligent agent to

account for increased risk posed by the unknown party and continuing to interact with the unknown party using the modified behavior.

As with the rejections of the other dependent claims, the Examiner has not specifically addressed what particular disclosure in *Heckerman* renders claim 116 obvious, or the reasons why claim 116 is not distinguishable from the prior art of record, other than making a naked citation of a list of passages from *Heckerman*. In addition, Applicants can find no disclosure in either reference that teaches any functionality that would even arguably be capable of identifying an unknown party as being untrustworthy, and controlling the behavior of an intelligent agent by modifying the behavior of the intelligent agent to account for increased risk posed by the unknown party and continuing to interact with the unknown party using the modified behavior.

Indeed, if the Examiner is taking the position that *Slotznick* discloses the identification of an unknown party through its disclosed login technique, the only circumstance where a party could even arguably be deemed “untrustworthy” would be if incorrect login information is entered. In that event, however, the unknown party could not be considered to have been “identified.” Further, Applicants presume that in the event of a failed login attempt, the client is not permitted to delegate any tasks to the intelligent agent. Consequently, the reference could not be read to disclose or suggest continuing to interact with an unknown party using modified behavior, as recited in claim 116.

Applicants therefore respectfully submit that the Examiner has failed to raise a *prima facie* case of obviousness with respect to claim 116. Reversal of the rejection, and allowance of claim 116, are therefore respectfully requested.

CONCLUSION

In conclusion, Applicant respectfully requests that the Board reverse the Examiner’s rejections of claims 54-63 and 104-116, and that the Application be passed to issue. If there are any questions regarding the foregoing, please contact the undersigned at 513/241-2324.

Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

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VIII. CLAIMS APPENDIX: CLAIMS ON APPEAL (S/N 09/431,833)

54. (Once Amended) A method of identifying an unknown party interacting with an intelligent agent, the method comprising the steps of:

(a) determining at least one attribute related to the unknown party, wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent;

(b) comparing the attribute for the unknown party with attributes related to a plurality of known parties; and

(c) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party.

55. (Original) The method of claim 54, wherein the determining step determines a plurality of attributes related to the unknown party, and wherein the comparing step compares the plurality of attributes for the unknown party with those of the plurality of known parties.

56. (Original) The method of claim 55, wherein the comparing step includes the step of accessing a database including a plurality of records, each record associated with a known party and including the plurality of attributes related thereto.

57. (Original) The method of claim 55, wherein each of the plurality of attributes has a weighting factor associated therewith, wherein the comparing step calculates an accumulated weighting factor for each known party by summing the weighting factors of the attributes of the known party which match those of the unknown party, and wherein the identifying step identifies the unknown party as the known party with the largest accumulated weighting factor.

58. (Original) The method of claim 55, wherein the unknown party is an intelligent agent configured to conduct electronic transactions, and wherein the plurality of attributes is selected from the group consisting of an agent name, a client name, a bank name, a bank account number, a credit card number, a homebase location, an agent program name, a location or name of a source with which the unknown party communicates, and combinations thereof.

59. (Original) The method of claim 55, wherein the unknown party is an intelligent agent, and wherein the determining step includes the step of scanning program code for the unknown party to determine attributes thereof.

60. (Once Amended) An apparatus for identifying an unknown party interacting with an intelligent agent, comprising:

(a) a database including a plurality of records, each record associated with a known party and including the plurality of attributes related thereto; and

(b) an identification module, coupled to the database, the identification module configured to compare a plurality of attributes for the unknown party with those of each known party and to identify the unknown party as the known party having the attributes which most closely match those of the unknown party, wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent.

61. (Once Amended) A program product comprising:

(a) a program configured to perform a method of identifying an unknown party interacting with an intelligent agent, the method comprising the steps of:

(1) determining at least one attribute related to the unknown party, wherein the unknown party is a party other than a client that has delegated at least one task to the intelligent agent;

(2) comparing the attribute for the unknown party with attributes related to a plurality of known parties; and

(3) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party; and

(b) a signal bearing media bearing the program.

62. (Original) The program product of claim 61, wherein the signal bearing media is transmission type media.

63. (Original) The program product of claim 61, wherein the signal bearing media is recordable media.

104. (Once Amended) The apparatus of claim 60, wherein each of the plurality of attributes has a weighting factor associated therewith.

105. (Added) The apparatus of claim 104, wherein the identification module is configured to calculate an accumulated weighting factor for each known party by summing the weighting factors of the attributes of the known party which match those of the unknown party, and to identify the unknown party as the known party with the largest accumulated weighting factor.

106. (Once Amended) The apparatus of claim 60, wherein the unknown party is an intelligent agent configured to conduct electronic transactions, and wherein the plurality of attributes are selected from the group consisting of an agent name, a client name, a bank name, a bank account number, a credit card number, a homebase location, an agent program name, a location or name of a source with which the unknown party communicates, and combinations thereof.

107. (Once Amended) The apparatus of claim 60, wherein the unknown party is an intelligent agent, and wherein the identification module is configured to scan program code for the unknown party to determine attributes thereof.

108. (Added) The program product of claim 61, wherein the program is configured to determine a plurality of attributes related to the unknown party, and to compare the plurality of attributes for the unknown party with those of the plurality of known parties.

109. (Added) The program product of claim 108, wherein the program is configured to access a database including a plurality of records, each record associated with a known party and including the plurality of attributes related thereto.

110. (Added) The program product of claim 108, wherein each of the plurality of attributes has a weighting factor associated therewith, wherein the program is configured to calculate an accumulated weighting factor for each known party by summing the weighting factors of the attributes of the known party which match those of the unknown party, and to identify the unknown party as the known party with the largest accumulated weighting factor.

111. (Added) The program product of claim 108, wherein the unknown party is an intelligent agent configured to conduct electronic transactions, and wherein the plurality of attributes are selected from the group consisting of an agent name, a client name, a bank name, a bank account number, a credit card number, a homebase location, an agent program name, a location or name of a source with which the unknown party communicates, and combinations thereof.

112. (Added) The program product of claim 108, wherein the unknown party is an intelligent agent, and wherein the program is configured to scan program code for the unknown party to determine attributes thereof.

113. (Added) A method of identifying an unknown party interacting with a first intelligent agent, the method comprising the steps of:

(a) determining at least one attribute related to the unknown party, wherein the unknown party is a second intelligent agent interacting with the first intelligent agent;

(b) comparing the attribute for the unknown party with attributes related to a plurality of known parties; and

(c) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party.

114. (Added) A method of identifying an unknown party interacting with an intelligent agent, the method comprising the steps of:

- (a) determining at least one attribute related to the unknown party;
- (b) comparing the attribute for the unknown party with attributes related to a plurality of known parties;
- (c) identifying the unknown party as the known party having the attribute which most closely matches that of the unknown party; and
- (d) controlling a behavior of the intelligent agent when interacting with the unknown party based upon the identification of the unknown party.

115. (Added) The method of claim 114, wherein controlling the behavior of the intelligent agent includes controlling a negotiation strategy used by the intelligent agent when conducting an electronic transaction with the unknown party.

116. (Added) The method of claim 114, wherein identifying the unknown party includes identifying the unknown party as being untrustworthy, and wherein controlling the behavior of the intelligent agent includes modifying the behavior of the intelligent agent to account for increased risk posed by the unknown party and continuing to interact with the unknown party using the modified behavior.

IX. EVIDENCE APPENDIX

09/431,833

None.

X. RELATED PROCEEDINGS APPENDIX

09/431,833

None.